

### **REMARKS**

This response is a full and complete response to the non-final Office Action dated November 1, 2006. In the present Office Action, claims 1-18 are pending in the application, claims 1, 10, and 15 stand rejected, claims 2-6, 11-14, 16, and 17 have been objected to as dependent from a rejected base claim, and claims 7-9 and 18 have been allowed.

As shown in the listing above, claims 1-8, and 11-18 have been amended. No new matter has been added. Claim 10 has been cancelled.

In view of both the amendments presented above and the following remarks, it is submitted that the claims pending in the application are nonobvious. It is believed that this application is in condition for allowance. By this response, reconsideration of the present application is respectfully requested in view of the foregoing amendments and the following remarks.

### ***AMENDMENTS TO THE CLAIMS***

Claims 1-8, and 11-18 have been amended. Claim 10 has been cancelled.

Claims 1, 3, 7, 8, 11, 13, 16, and 17 have been amended to make an editorial change by removing all paragraph numbering and lettering. Claim 11 was rewritten to be in independent form by incorporating limitations from base claim 10. Claims 1 and 11 were amended to remove the iteration of the method in the final step. Claims 14 and 18 were amended to correct their respective dependencies. Claim 15 was amended to make an editorial change improving the readability of the claim. Claim 16 was amended to correct a term to correspond to its antecedent. Method claims were also amended to remove any reference to "steps" or "step".

In these amendments, no new matter has been added. The amendments are believed to be proper and justified.

***ALLOWABLE SUBJECT MATTER***

Claims 7-9 and 18 have been allowed. Claims 2-6, 11-14, and 16-17 have been objected to as being dependent from a rejected base claim, but would be allowable if rewritten in independent form including all the limitations of the base claim and any intervening claims. Assignee's representative thanks the Examiner for identifying allowable subject matter.

In view of the cancellation of claim 10 and the subsequent amendment of claim 11 to be in independent form including limitations of claim 10, it is submitted that claims 11-14 are allowable.

While claims 2-6 and 16-17 have not been amended into independent form at this time, assignee expressly reserves the right to amend one or more of claims 2-6 and 16-17 into independent form at a future point in this prosecution without prejudice.

***CITED ART***

U.S. Patent 6,683,921 to Shiraishi et al. ("Shiraishi"), U.S. Patent Application Publication No. 2002/0168034 to Yang et al. ("Yang"), and 5,469,115 to Peterzell et al. ("Peterzell"), and U.S. Patent Application Publication No. 2001/0055320 to Pierzga et al. ("Pierzga") are all cited and applied in the present Office Action. In the *Notice of References Cited* attached to the present Office Action, U.S. Patent 5,468,115 to Alvis was cited yet U.S. Patent 5,469,115 to Peterzell was identified on page 2 of the present Office Action. It is apparent that the *Notice* is in error and should be corrected, since the Alvis patent is entirely inapplicable to the technical area of the present application.

***CLAIMS REJECTIONS UNDER 35 USC § 103***

***Claim 1***

Claims 1 and 15 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Yang in view of Peterzell, further in view of Shiraishi. This rejection is respectfully traversed.

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art references when combined must teach or suggest all the claim limitations. (See MPEP § 2142.). Motivations to combine or modify references must come from the references themselves or be within the body of knowledge in the art. (See MPEP § 2143.01.)

Claim 1 clearly calls for a “method of detecting the presence of a data packet” comprising of:

- down-converting said RF signal into in-phase (I) and quadrature (Q) baseband signals;*
- removing direct current (DC) offsets from said I and Q baseband signals;*
- modulating said I and Q baseband signals;*
- performing amplitude normalization on said modulated I and Q baseband signals;*
- comparing said amplitude normalized I and Q baseband signals to a reference signal via a complex correlator;*
- detecting a peak of said complex correlator output; and*
- in response to said peak being above a predefined threshold, indicating that a data packet has been received.*

Yang is stated in the present Office Action to lack any teaching or suggestion about removing DC offsets, modulating the I and Q baseband signals, and performing amplitude normalization on the modulated I and Q signals. Peterzell is then added to Yang to overcome the lack of teaching on removing DC offsets.

Peterzell is related to the automatic gain control (AGC) function. The AGC function is not related to the data detection function. Peterzell lacks any teaching or suggestion that his DC notch filter should be applied in data detection at all. Instead, he uses the filter in a feedback path of the AGC circuit. Yang shows no appreciation at all for errors caused by DC offsets. It is improper to combine these references because neither has shown an appreciation for the possibility of data detection errors caused DC offsets or for the need to remove DC offsets from the baseband signals as part of the data detection process. That has only been appreciated and claimed in claim 1 of the present

application. Thus, there is no motivation to combine the references in the manner suggested.

Even if the references were to be combined in the manner suggested by the present Office Action, they would still fail to result in a combination that teaches, shows, or suggests the limitations in claim 1. Missing from such a combination would be the two-rail structure utilized after down-converting in claim 1. The two-rail structure is evident by the existence of BOTH in-phase (I) and quadrature (Q) signals in the remaining steps through the comparing step. As a result, the references, separately and in combination fail to teach, show, or suggest the limitations present in claim 1.

Obviously lacking from the present Office Action is any express showing that Yang or any of the other applied references includes a teaching, showing, or suggestion of "comparing said normalized I and Q baseband signals to a reference signal via a complex correlator". For this reason, it is believed that a *prima facie* case of obviousness has not been established.

In light of all the significant differences between claim 1 and the references applied thereto, it is submitted that claim 1 would not have been obvious to a person skilled in the art upon a reading of Yang, Peterzell, Pierzga, and Shiraishi, either separately or in combination. Therefore, it is believed that claim 1 is allowable under 35 U.S.C. §103. Since claim 15 includes limitations similar to those of claim 1 in the context of an apparatus claim, it is also believed, for the same reasons set forth above, that claim 15 is allowable under 35 U.S.C. §103. It is respectfully requested that the rejection of these claims be withdrawn.

### **CONCLUSION**

In view of the foregoing, it is respectfully submitted that all the claims pending in this patent application are in condition for allowance. Reconsideration and allowance of all the claims are respectfully solicited.

If, however, the Examiner believes that there are any unresolved issues requiring adverse final action in any of the claims now pending in the application, it is requested

that the Examiner telephone Gregory C. Ranieri, Esq. at (503) 439-6500 so that appropriate arrangements can be made for resolving such issues as expeditiously as possible.

In the event there are any errors with respect to the fees for this response or any other papers related to this response, the Director is hereby given permission to charge any shortages and credit any overcharges of any fees required for this submission to Deposit Account number 50-3703.

Respectfully submitted,

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